

PATENT  
 USSN 10/044,692  
 TTC Docket 002640US  
 Geron Docket 018/213c

# Claim Amendments

1. ~~(Currently amended) An immunogenic composition comprising:~~
  - ~~a) human telomerase reverse transcriptase (hTERT) protein (SEQ. ID NO:2);~~
  - ~~b) an immunogenic polypeptide fragment of hTERT consisting of an amino acid sequence identical to at least 20 contiguous amino acids of SEQ. ID NO:2;~~
  - ~~c) a chimeric protein consisting of an amino acid sequence identical to at least 20 contiguous amino acids of SEQ. ID NO:2 fused with an amino acid sequence of another protein;~~or
  - ~~d) a nucleic acid encoding any of a), b) or c)~~

A composition comprising an isolated recombinant nucleic acid that encodes:

- a) human telomerase reverse transcriptase (hTERT) protein (SEQ. ID NO:2); or
  - b) a polypeptide fragment consisting of at least 20 contiguous amino acids of SEQ. ID NO:2
- which is immunogenic for a specific response against hTERT (SEQ. ID NO:2).

2 to 9. CANCELLED

10. ~~(Currently amended) The pharmaceutical composition of claim 1, further comprising an adjuvant.~~

11 to 18. CANCELLED

19. ~~(Currently amended) The composition of claim 1, in an amount wherein said protein, polypeptide, or nucleic acid is effective for eliciting an immunological response specific for telomerase reverse transcriptase hTERT protein in a mammalian subject.~~

20. ~~(Original) The composition of claim 1, packaged in a container along with an indication of how the composition is to be administered.~~

21. ~~(Currently amended) An immunogenic composition comprising a nucleic acid that encodes:~~
  - ~~a) hTERT protein (SEQ. ID NO:2);~~
  - ~~b) an immunogenic polypeptide fragment of hTERT consisting of an amino acid sequence identical to at least 20 contiguous amino acids of SEQ. ID NO:2; or~~
  - ~~c) a chimeric protein consisting of an amino acid sequence identical to at least 20 contiguous amino acids of SEQ. ID NO:2 fused with an amino acid sequence of another protein~~

A composition comprising an isolated recombinant nucleic acid that encodes a polypeptide fragment consisting essentially of at least 10 contiguous amino acids of SEQ. ID NO:2 which is immunogenic for a specific response against hTERT (SEQ. ID NO:2).

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22. *(Currently amended)* The nucleic acid composition of ~~claim 21~~ claim 1, wherein the nucleic acid encodes full-length hTERT protein (SEQ. ID NO:2).
23. *(Currently amended)* The nucleic acid composition of claim 21, wherein the nucleic acid ~~encodes an immunogenic polypeptide fragment of hTERT consisting of an amino acid sequence identical to at least 20 contiguous amino acids of SEQ. ID NO:2~~  
encodes a polypeptide fragment consisting essentially of at least 20 contiguous amino acids of SEQ. ID NO:2.
24. *(Currently amended)* The nucleic acid composition of claim 21, wherein the nucleic acid ~~encodes an immunogenic polypeptide fragment of hTERT consisting of an amino acid sequence identical to at least 50 contiguous amino acids of SEQ. ID NO:2~~  
encodes a polypeptide fragment consisting essentially of at least 50 contiguous amino acids of SEQ. ID NO:2.
25. *(Currently amended)* ~~The nucleic acid composition of claim 21, wherein the nucleic acid~~  
A composition comprising an isolated nucleic acid that encodes a chimeric protein ~~consisting of an amino acid sequence identical to at least 20 contiguous amino acids of SEQ. ID NO:2 fused with an amino acid sequence of another protein~~  
consisting of an immunogenic fragment of SEQ. ID NO:2 fused to another protein that enhances the immune response to said fragment of SEQ. ID NO:2.
26. *(Previously presented)* The nucleic acid composition of claim 25, wherein the other protein is keyhole limpet hemocyanin (KLH).
27. *(Currently amended)* The nucleic acid composition of ~~claim 21~~ claim 1, wherein the nucleic acid is DNA.
28. *(Currently amended)* The nucleic acid composition of ~~claim 21~~ claim 1, wherein the nucleic acid is RNA.
29. *(Currently amended)* The nucleic acid composition of ~~claim 21~~ claim 1, wherein the nucleic acid is contained in a plasmid.
30. *(Currently amended)* The nucleic acid composition of ~~claim 21~~ claim 1, wherein the nucleic acid is contained in a viral vector.

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31. *(Currently amended)* The nucleic acid composition of ~~claim 24~~ claim 1, wherein the nucleic acid is contained in an adenovirus vector.
32. *(Currently amended)* The nucleic acid composition of ~~claim 24~~ claim 1, wherein the nucleic acid is contained in a herpes virus or Epstein Barr Virus vector.
33. *(Currently amended)* The nucleic acid composition of ~~claim 24~~ claim 1, wherein the nucleic acid further comprises a promoter to control expression of said hTRT protein or fragment.
- 34 to 38. **CANCELLED**

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39. (New) An isolated recombinant nucleic acid that encodes:
  - a) human telomerase reverse transcriptase (hTERT) protein (SEQ. ID NO:2); or
  - b) a polypeptide fragment consisting essentially of an amino acid sequence encoded in at least 100 consecutive bases of SEQ. ID NO:1, which is immunogenic for a specific response against hTERT (SEQ. ID NO:2).
40. (New) The nucleic acid of claim 39, which encodes at least 100 consecutive bases of SEQ. ID NO:1.
41. (New) An isolated recombinant nucleic acid comprising a promoter and a sequence encoding an hTERT peptide fragment,
  - wherein said encoding sequence consists essentially of at least 50 consecutive bases of SEQ. ID NO:1;
  - wherein said promoter controls expression of said encoding sequence;
  - and wherein said peptide fragment is immunogenic for a specific response against hTERT (SEQ. ID NO:2).
42. (New) The nucleic acid of claim 41, wherein said encoding sequence consists essentially of at least 200 consecutive bases of SEQ. ID NO:1.
43. (New) An isolated recombinant nucleic acid that encodes a polypeptide consisting essentially of at least 10 contiguous amino acids of SEQ. ID NO:2, wherein said polypeptide does not have telomerase catalytic activity when cotranslated with telomerase RNA component (hTR), but is immunogenic for a specific response against hTERT (SEQ. ID NO:2).
44. (New) The nucleic acid of claim 43, encoding a polypeptide fragment consisting essentially of at least 20 contiguous amino acids of SEQ. ID NO:2.
45. (New) The nucleic acid of claim 43, encoding a polypeptide fragment consisting essentially of at least 50 contiguous amino acids of SEQ. ID NO:2.
46. (New) The nucleic acid of claim 43, encoding a full-length telomerase protein with a mutation or deletion of the FFYxTE motif (SEQ. ID NO:127) or the DD motif.
47. (New) The nucleic acid of claim 43, further comprising a promoter to control expression of said polypeptide.

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48. (New) The nucleic acid of claim 43, contained in a plasmid vector.
49. (New) The nucleic acid of claim 43, contained in a viral vector.
50. (New) The nucleic acid of claim 43, contained in an adenovirus vector, a herpes virus vector, or Epstein Barr Virus vector.
51. (New) The composition of claim 25, wherein said nucleic acid further comprises a promoter to control expression of said chimeric protein.
52. (New) The composition of claim 25, wherein the nucleic acid is contained in a plasmid vector.
53. (New) The composition of claim 25, wherein the nucleic acid is contained in a viral vector.
54. (New) The composition of claim 25, wherein the nucleic acid is contained in an adenovirus vector, a herpes virus vector, or Epstein Barr Virus vector.